UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,179	01/16/2002	David W. Hughes	1452.3670000	2789

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EXAMINER
PITARO, RYAN F

ART UNIT	PAPER NUMBER
2174	

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/046,179	HUGHES, DAVID W.
	Examiner	Art Unit	
	Ryan F. Pitaro	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _31 May 2005_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-24_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-24_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-24 have been examined.

Response to Amendment

2.   This action is in response to Amendment A filed on 5/31/2005. Claims 1-24 are

pending, claims 1,8,9,16,17 and 24 are independent. This action is Final.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-6,8-11,16-19, and 24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Interactive Physics ("IP", Creating Simulations using Interactive

Physics 2000) in view of Harada et al ("Harada", US 5,604,848).

Examiner acknowledges that the date on the Interactive Physics art is after the

filing date, however, the tutorial pertains to the software, as seen on the cover of

the conference was copy written in the year 2000, which was known prior to the

filing date of the application.

As per independent claim 1, IP discloses a method for providing interactive user navigation in a real-time three dimensional simulation, comprising the steps of: combining physical elements from a predefined set of physical elements to construct a plurality of behavioral assemblies (Figure 1 page 3 lines 4-18); storing said plurality of behavioral assemblies in a library (Page 3 lines 19-24). IP fails to distinctly point out a 3d simulation and using the behavioral assemblies for 3d navigation. However, Harada teaches executing the real-time three dimensional simulation; selecting one of said plurality of behavioral assemblies from said library during execution of the simulation, wherein said selected one of said plurality of behavioral assemblies provides a physics-based eye-point model for user navigation in the simulation (Column 4 lines 30-40). Therefore it would have been obvious to an artisan at the time of the invention to combine the method of IP with the teaching of Harada. Motivation to do so would have been to provide a viewpoint to the user to conform with the conditions of an atmosphere.

As per claim 2, which is dependent on claim 1, IP-Harada discloses a method wherein said combining step comprises: presenting said predefined set of physical elements in a first window of a graphical user interface (IP, Figure 1 page 3); and selectively combining physical elements from said first window in a second window of said graphical user interface to construct said plurality of behavioral assemblies (IP, Page 3 lines 5-15).

As per claim 3, which is dependent on claim 2, IP-Harada discloses a method wherein said combining step further comprises: adjusting a parameter of at least one of said selectively combined physical elements in a third window of said graphical user interface (IP, Page 9 Figure 15).

As per claim 4, which is dependent on claim 3, IP-Harada discloses a method wherein said combining step further comprises: simulating the performance of said plurality of behavioral assemblies in a fourth window of said graphical user interface (IP, Page 4 Figure 5).

As per claim 5, which is dependent on claim 1, IP-Harada discloses a method wherein said predefined set of physical elements includes at least one of a passive element, a constraint, an active element, or a resistive element (IP, Page 3 Figure 1; Pulleys, Springs, etc).

As per claim 6, which is dependent on claim 1, IP fails to distinctly point out navigation requests, and tasks from those requests. However, Harada teaches a method wherein said selecting step comprises: identifying a goal request (Column 3 lines 39-45); translating said goal request into a plurality of tasks (Column 3 lines 53-56, Column 4 lines 1-5); and selecting one of said plurality of behavioral assemblies from said library to perform one of said plurality of tasks, wherein said selected one of said plurality of behavioral assemblies provides a physics-based eye-point model for user navigation during performance of said one of said plurality of tasks (Column 4 lines 30-

40). Therefore it would have been obvious to an artisan at the time of the invention to combine the method of IP with the teaching of Harada. Motivation to do so would have been to provide a customizable way of navigating a 3D model.

As per independent claim 8, IP-Harada discloses a method for interactive user navigation in a real-time three dimensional simulation, comprising the steps of: combining physical elements from a predefined set of physical elements to construct a plurality of behavioral assemblies (IP, Figure 1 page 3 lines 4-18); storing said plurality of behavioral assemblies in a library; executing the real-time three dimensional simulation (IP, Page 3 lines 19-24); and during execution of the real-time three dimensional simulation (Harada, Column 3 lines 53-56): generating a goal request (Harada, Column 3 lines 39-45), translating said goal request into a plurality of tasks (Harada, Column 3 lines 53-56, Column 4 lines 1-5), and selecting one of said plurality of behavioral assemblies from said library to perform one of said plurality of tasks, wherein said selected one said plurality of behavioral assemblies provides a physics-based eye-point model for user navigation during performance of said one of said plurality of tasks (Column 4 lines 30-40).

Claims 9 and 17 are individually similar in scope to that of claim 1, and are therefore rejected under similar rationale.

Claims 10 and 18 are individually similar in scope to that of claim 2, and are therefore rejected under similar rationale.

Claims 11 and 19 are individually similar in scope to that of claim 3, and are therefore rejected under similar rationale.

Claims 12 and 20 are individually similar in scope to that of claim 4, and are therefore rejected under similar rationale.

Claims 13 and 21 are individually similar in scope to that of claim 5, and are therefore rejected under similar rationale.

Claims 14 and 22 are individually similar in scope to that of claim 6, and are therefore rejected under similar rationale.

Claims 16 and 24 are individually similar in scope to that of claim 8, and are therefore rejected under similar rationale.

5.   Claims 7,15, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Interactive Physics ("IP", Creating Simulations using Interactive Physics 2000) and Harada et al ("Harada", US 5,604,848) in view of Chen ("Chen", Physics-Based Modeling and Real-Time Simulation).

As per claim 7, which is dependent on claim 1, IP-Harada fails to distinctly point out interaction between objects in the simulation. However, Chen teaches detecting a collision between said selected one of said plurality of behavioral assemblies and an object in the real-time three dimensional simulation (Page 102 Column 102.1 lines 39-44); and invoking a real-time physics engine to model the interaction between said selected one of said plurality of behavioral assemblies and said object (Page 99 Column 99.1 lines 14-25). Therefore it would have been obvious to an artisan at the time of the invention to combine the method of IP-Harada with the teaching of Chen. Motivation to do so would have been to simulate a real life atmosphere wherein all objects play a role in the simulation.

Claims 15 and 23 are individually similar in scope to that of claim 7, and are therefore rejected under similar rationale.

Response to Arguments

Applicant's arguments filed 5/31/2005 have been fully considered but they are not persuasive.

The Applicant argues that Harada fails to teach selecting one of the said plurality of behavioral assemblies from said library during execution of the simulation, wherein said selected one of said plurality of behavioral assemblies provides a physics-based eye point model for user navigation in the simulation. The Examiner disagrees and points to the original citation in the previous action. Harada does in fact teach selecting a behavioral assembly from a library during the execution of the simulation, it uses the different forces applied to the vehicle to generate the view point (Column 4 lines 33-36), as the vehicle's route changes the view point changes (Column 4 lines 30-33), therefore during the execution of the simulation a new behavioral assembly is selected, which provides a eye point model for user navigation. The Examiner further points out Column 3 lines 53-56, Column 4 lines 1-28 for clarification purposes.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ryan F Pitaro whose telephone number is 571-272-

4071. The examiner can normally be reached on 7:00am - 4:30pm Monday through

Thursday and on alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kristine Kincaid can be reached on 571-272-4063. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Ryan Pitaro
Art Unit 2174
Patent Examiner

RFP

D. LUU
PRIMARY EXAMINER